

CLAIMS

What is claimed:

1. A method for collecting temperature data in a facility wherein the facility includes a plurality of systems comprising:
 3. coupling a plurality of sensors to at least one of the systems;
 4. connecting each of the plurality of sensors to a central system; and
 5. utilizing the central system to collect temperature data from each of the plurality of sensors.
1. 2. The method of claim 1 wherein the facility comprises a data center and each of the plurality of systems comprises a rack of computer systems.
1. 3. The method of claim 1 wherein coupling a plurality of sensors to at least one of the systems further comprises:
 3. connecting each of the plurality of sensors to the at least one of the systems via a flexible stalk.
1. 4. The method of claim 1 wherein connecting each of the plurality of sensors to a central system further comprises:
 3. utilizing an electro-mechanical connector to connect each of the plurality of sensors to the central system.
1. 5. The method of claim 1 wherein utilizing the central system to collect temperature data from each of the plurality of sensors further comprises:

3 periodically querying the plurality of sensors to collect temperature data related
4 to the at least one system; and

5 creating an ambient temperature profile of the facility based on the temperature
6 data.

1 6. The method of claim 1 wherein the plurality of sensors comprises 8 sensors.

1 7. The method of claim 4 wherein the electro-mechanical connector comprises a
2 connector board.

1 8. The method of claim 5 wherein the central system includes an embedded control
2 and the embedded controller is utilized to periodically query the plurality of sensors and
3 create an ambient temperature profile.

1 9. The method of claim 7 wherein the connector board includes at least one RJ-11 type
2 connector.

1 10. The method of claim 8 wherein the ambient temperature profile comprises a 3-
2 dimensional matrix view.

1 11. A system for collecting temperature data in a data center wherein the data center
2 includes a plurality of racks of systems comprising:

3 at least one plurality of sensors coupled to the at least one of the rack of systems;
4 means for connecting the at least one plurality of sensors to a central system; and

5 means for utilizing the central system to collect temperature data from the at least
6 one plurality of sensors.

1 12. The system of claim 11 wherein each of the plurality of sensor is coupled to the
2 at least one of the rack of systems via a flexible stalk.

1 13. The system of claim 11 wherein the means for connecting the at least one
2 plurality of sensors to a central system comprises an electro-mechanical connector.

1 14. The system of claim 11 wherein the plurality of sensors comprises 8 sensors.

1 15. The system of claim 13 wherein the electro-mechanical connector comprises a
2 connector board.

1 16. The system of claim 15 wherein the connector board includes at least one RJ-11
2 type connector.

1 17. The system of claim 16 wherein the means for utilizing the central system to
2 collect temperature data from the at least one plurality of sensors further comprises:
3 means for periodically querying the plurality of sensors to collect temperature
4 data related to the at least one rack of systems; and
5 means for creating an ambient temperature profile of the data center based on the
6 temperature data.

1 18. A data center comprising:
2 at least one rack of systems;
3 at least one plurality of sensors coupled to the at least one rack of systems;
4 at least one electro-mechanical connector coupled to the at least one plurality of
5 sensors; and
6 a central computer system coupled to the at least one electro-mechanical
7 connector for collecting temperature data related to the at least one rack of systems.

1 19. The data center of claim 18 wherein each of the plurality of sensor is coupled to
2 the at least one of the rack of systems via a flexible stalk.

1 20. The data center of claim 18 wherein the at least one electro-mechanical connector
2 comprises a connector board.

1 21. The data center of claim 18 wherein the plurality of sensors comprises 8 sensors.

1 22. The data center of claim 18 wherein the central computer system includes logic
2 for:
3 periodically querying the plurality of sensors to collect temperature data related
4 to the at least one rack of systems; and
5 creating a temperature profile of the data center based on the temperature data.

1 23. The data center of claim 20 wherein the connector board includes at least one RJ-
2 11 type connector.

1 24. A computer program product for collecting temperature data in a data center
2 wherein the data center includes a plurality of racks of systems, the computer program
3 product comprising a computer usable medium having computer readable program means
4 for causing a computer to perform the steps of:

5 receiving data from a plurality of temperature sensors coupled to at least one of
6 the plurality of racks of systems; and
7 creating a temperature profile of the data center based on the temperature data.

1 25. The computer program product of claim 24 wherein receiving data from a
2 plurality of temperature sensors coupled to at least one of the plurality of racks of
3 computer systems further comprises means for causing a computer to perform the step
4 of:

5 querying of each of the sensors in the data center;
6 providing an initiation command;
7 reading the measured temperature of each of the sensors; and
8 generating a temperature profile of the data center based on the temperature
9 readings.

1 26. The computer program product of claim 25 wherein the temperature profile
2 includes a variety of profiles based on varying locations of the sensors.

1 27. A temperature collection module for collecting temperature data in a data center
2 wherein the data center includes a plurality of racks of systems comprising.
3 a first set of interface electronics for interfacing with a plurality of sensors

4 coupled to at least one of the plurality of racks of systems;
5 temperature collection logic coupled to the first set of interface electronics for
6 collecting temperature data from the plurality of racks of systems; and
7 a second set of interface electronics coupled to the temperature collection logic for
8 interfacing with a central computer system.

1 28. The module of claim 27 wherein the temperature collection logic further
2 comprises logic for:

3 querying of each of the sensors in the data center;
4 providing an initiation command;
5 reading the measured temperature of each of the sensors; and
6 generating a temperature profile of the data center based on the temperature
7 readings.

1 29. The module of claim 28 wherein the temperature profile includes a variety of
2 profiles based on varying locations of the sensors.